

**Keywords:** frailty, minor injury, functional decline

#### MP017

##### Impact of physician payment mechanism on wait times and ED length of stay

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**Introduction:** Vancouver Coastal Health (VCH) emergency physicians have been on contract based funding models for two decades. On October 1, 2015, physicians at one hospital (SPH) switched to fee-for-service (FFS) payments. Conventional wisdom is that FFS physicians are motivated to see more patients quickly and achieve higher throughput. Our hypothesis was that FFS payment would reduce patient wait times. **Methods:** This interrupted time series analysis with concurrent control was performed in VCH Region, where there are two tertiary EDs. During the 20-week study period (July 15-Nov 30), VGH remained on contract, while SPH converted to FFS (the intervention). VCH administrative data was aggregated by week. Our primary outcome was median wait time to MD. Secondary outcomes were ED LOS and left-without-being-seen (LWBS) rates. **Results:** Interrupted time series plots will be presented for the data. Data from 67,214 ED visits were analyzed (31,733 SPH, 35,481 VGH). Figure 1 shows that baseline wait time was 74 minutes at the control and 53 minutes at the intervention site. During the pre-intervention period, there was a non-significant downward trend of 0.4 minutes per week at the intervention hospital relative to control ( $p = 0.26$ ). After FFS conversion, there was a 4.1 minute increase in wait time at the control site ( $p = 0.18$ ), and a significant downward trend of 1.4 minutes per week ( $p = 0.001$ ). After FFS conversion, wait times at the intervention site increased by 4.8 minutes more than control ( $p$ -value for the difference = 0.27), and the wait time trend increased significantly by 1.3 minutes per week relative to the expected counterfactual trend ( $p = 0.02$ ). Baseline EDLOS for discharged patients was 227 minutes at the control hospital and 193 minutes at the intervention site. There were similar pre-intervention LOS increases at both hospitals. Post-intervention, both sites saw significant increases in EDLOS, followed by a similar downward trends of -2.68 minutes per week ( $p = 0.001$ ). Baseline LWBS rate was 3.86% at the control hospital and 3.56% at the intervention site. Pre-intervention trends, and post-intervention level/trend changes did not differ by site. **Conclusion:** Conversion to FFS payment was associated with an increase in wait time trend of 1.3 minutes per week relative to control. There were no significant changes in EDLOS or LWBS rates. In this preliminary analysis, FFS payment had little effect on wait times or patient throughput.

**Keywords:** physician compensation, efficiency, fee for service

#### MP018

##### Exercise prescription by Canadian emergency medicine physicians

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**Introduction:** Health promotion and disease prevention have been increasingly recognized as activities within the scope of emergency medicine. Exercise prescription by physicians has been shown to improve outcomes in obesity, cardiovascular disease, and many other diseases. An estimated 600,000 Canadians receive the majority of their care from emergency departments (ED), representing a substantial opportunity for health promotion. Our study examined the frequency of exercise

prescription by emergency physicians (EPs) and determined factors that influence decisions to prescribe exercise. **Methods:** A national, confidential 22-item survey was distributed to Canadian EPs via email by the CAEP survey distribution protocol in November/December 2015. Demographics, exercise prescription rates and self-reported exercise habits were collected. **Results:** A total of 332 EPs responded. 92.4% of EPs reported being at least moderately active. 62.7% of EPs often or always counsel their patients about preventative medicine (smoking cessation, drug and alcohol use, diet and safe sex). However, only 23.8% often or always ask about their exercise habits. Even fewer (12.7%) often or always prescribe exercise. Training background significantly predicted level of comfort prescribing exercise. CCFP trained EPs were 5.1 ( $p = 0.001$ ) times more likely than trained EPs to respond 'yes' they feel comfortable prescribing exercise, and 3.7 ( $p = .009$ ) times more likely to respond 'sometimes'. CCFP (EM) trained EPs were 3.5 ( $p < 0.001$ ) times more likely than trained EPs to respond 'yes' they feel comfortable prescribing exercise, and 2.0 ( $p = .031$ ) times more likely to respond 'sometimes'. 76.1% of respondents believe that other EPs rarely or never prescribe exercise. Of respondents, only 36% feel comfortable prescribing exercise. The majority of EPs (73.4%) believe that the ED environment did not allow adequate time for exercise prescription. **Conclusion:** The majority of EPs counsel their patients regarding other forms of preventative medicine but few prescribe exercise to their patients. Available time in the ED was cited as a significant barrier to exercise prescription. CCFP trained EPs are more comfortable prescribing exercise, suggesting that their training may better educate and prepare them to counsel patients on exercise compared to trained EPs. Further education may be required to standardize an approach to prescribing exercise in the ED.

**Keywords:** exercise, health promotion, education

#### MP019

##### Systematic review of the management of lateral epicondylitis using transdermal nitroglycerin

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**Introduction:** Lateral epicondylitis (LE), also known as tennis elbow, is an overuse-underuse tendinopathy originating from the forearm extensor tendons of the elbow. An emerging therapy for the treatment of LE is the use of transdermal nitroglycerin (NTG) patches for pain relief and improved function. Our systematic review assesses 18 to 65 year old patients with clinically diagnosed LE and no structural damage or longstanding elbow injury to determine if transdermal NTG patches provide improved short term and long term pain relief as well as improved function in comparison with placebo. **Methods:** We included randomised controlled trials (RCT's) of NTG patch use versus placebo for the treatment of LE. Prospective comparison studies were also eligible for assessing the long term pain relief of NTG patch use. We performed a literature search using MEDLINE, EMBASE, SportDiscus and the Cochrane Database of Systematic Reviews. English language articles were retrieved for review up to November 2015. Risk of bias within the studies was assessed regarding randomisation, allocation sequence concealment, blinding and selective outcome reporting. **Results:** Three RCT's were included that compared transdermal NTG patch use (two studies with 1.25mg/24h and one study comparing 0.72, 1.44 and 3.6mg/24h) versus a placebo to treat LE. One prospective comparison study of five years duration was included as a follow-up to one of the included RCT's to assess pain and function five years after the discontinuation of therapy. Data was not pooled because of heterogeneity in study methods and outcomes. The use of transdermal NTG patches provided short term pain relief (2-6 weeks for dosing of 0.72mg/24h or 1.25mg/24h) compared with placebo as suggested by three RCT's. Long term pain relief was improved by NTG patch use compared with placebo

at six months in one RCT, but not at five years in a prospective comparison study. Function improved in two different RCT's with NTG patch use at 0.72mg/24h and 1.25mg/24h when compared to placebo. Five years after cessation of treatment, there was no difference between NTG patch and placebo. **Conclusion:** Overall, the included studies demonstrate that the use of NTG patches compared to placebo improves short term and long term pain relief, as well as elbow function. However, more studies are required to bridge the gaps between the existing studies and reduce heterogeneity between the study designs.

**Keywords:** lateral epicondylitis, nitroglycerin

#### MP020

##### Do real-time Twitter metrics correlate with traditional emergency medicine post-conference speaker evaluations?

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**Introduction:** Traditional post-conference speaker evaluations are inconsistently completed; meanwhile, real time social media tools such as Twitter are increasingly used in conferences. We sought to determine whether a correlation exists between traditional conference evaluation for a speaker and the number of real-time tweets it generated using data from a CAEP conference. **Methods:** This study utilized a retrospective design. The hashtag #CAEP14 was prospectively registered with Symplur, an online Twitter management tool, so that all tweets related to CAEP conference 2014 were stored. A tweet was associated with a session if it mentioned the speaker name, or if the tweet content and timing closely matched that of the session in the schedule. A tweet classification system was developed to differentiate original tweets from retweets, and quotes from comments generating further discussion. Two authors assessed and coded the first 200 tweets together to ensure a uniform approach to coding, and then independently coded the remaining tweets. Discrepancies were resolved by consensus. One author reviewed post-conference speaker evaluation, and abstracted the value corresponding to the question "The speaker was an effective communicator". We present descriptive statistics and correlation analyses. **Results:** A total of 3,804 tweets were collected, with 2,218 (58.3%) associated with a session. Forty-eight (48%) (131 out of 274) of sessions receiving at least one tweet, with a mean of 11.7 tweets per session (95% CI of 0 to 57.5). In comparison, only 31% (85 out of 274) of sessions received a formal post conference speaker evaluation ( $p < 0.005$ ). For sessions that received at least one traditional post-conference evaluation, there was no significant correlation between the number of tweets and evaluation scores ( $R = 0.087$ ). This can be attributed to the fact that there was minimal variation between evaluation scores (median = 3.6 out of 5, IQR of 3.4 to 3.7). **Conclusion:** There was no correlation between the number of real-time tweets and traditional post-conference speaker evaluation. However, many sessions which received no formal speaker evaluation generated tweets, and the number of tweets was highly variable between sessions. Thus, Twitter metrics might be useful for conference organizers to supplement formal speaker evaluations. **Keywords:** social media, altmetrics, program evaluation

#### MP021

##### Contributing factors and time delays in management of difficult airways in the emergency department - a retrospective analysis

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**Introduction:** Delays in definitive management of difficult airways in the Emergency Department (ED), often involving coordination with

expert consultation from Anesthesia and/or Otolaryngology, can lead to devastating outcomes. Currently at our ED there is no standardized approach to identifying and/or managing predicted difficult airway scenarios. We sought to determine the most common factors contributing to predicted difficult airways in the ED, and areas of time delays in securing a definitive airway. **Methods:** We conducted a retrospective analysis at a tertiary academic centre (>160,000 ED visits/yr) over a 5 year period. A research assistant screened all cases of "Stat" pages from the ED to the Anesthesia service. An ED clinician performed a thorough review of the charts to confirm difficult airway cases. A single reviewer extracted data on patient demographics, factors associated with a difficult airway, and specific time intervals throughout a patient's clinical course. We present descriptive statistics with 95%CI. **Results:** 45 cases met our inclusion criteria between Jan 2010-Dec 2014. 16 were excluded and a total of 29 cases of difficulty airways in the ED were included in our final analysis. The average age was 56.7 (95% CI 50.1-63.4) years, and 68.9% were male. The most common factors contributing to difficult airway included: Obesity (48.2%), previous history of head/neck malignancy/radiation (27.6%), and facial edema (20.7%). 25 (86.2%) required expert assistance from Anesthesia/Otolaryngology for definitive airway, and 8 (27.6%) survived to hospital discharge. The mean time between decision to intubate and "Stat" anesthesia page was 14.0 (95% CI 8.7-19.3) mins. The mean time from "Stat" anesthesia page to arrival of anesthesia MD was 8.4 (95% CI 6.0-10.7) mins. The mean time between arrival of anesthesia MD and definitive airway was 12.1 (95% CI 7.4-16.8) mins. The mean time between decision to intubate and definitive airway was 35.5 (95% CI 27.9-43.1) mins. **Conclusion:** We found a number of common factors contributing to a patient's risk of having a predicted difficult airway in the ED, as well as areas of significant time delays in the unstandardized, multidisciplinary management of these cases. Future work is needed on developing, implementing, and evaluating more standardized difficult airway response protocols in the ED.

**Keywords:** difficult airway, anesthesia, quality improvement

#### MP022

##### Anticoagulation use in patients with atrial fibrillation/flutter in Canadian emergency departments since the introduction of the novel anticoagulants

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**Introduction:** Despite strong evidence that antithrombotic drugs in atrial fibrillation/flutter (AF) patients reduce stroke risk, previous emergency department (ED) pre-novel anticoagulant (NOAC) studies have shown that most discharged patients are not optimally treated. This study sought to determine baseline antithrombotic management in AF patients, and appropriate antithrombotic prescription upon ED discharge since the introduction of NOACs. **Methods:** Consecutive AF patients discharged by the ED physician from three academic EDs in Toronto, Canada were retrospectively identified using ECG data. Primary AF was defined as AF in patients  $\geq 18$  years without congenital heart disease or other acute medical conditions. All management and disposition decisions were left to the discretion of the emergency doctor. **Results:** From July 2012 to October 2014, 691 patients with primary AF were identified. Of these, 34.4% ( $n = 238$ ) had new onset AF and 66.4% ( $n = 459$ ) were discharged home directly from the ED. Of those with previously known AF ( $n = 453$ ), 44.2% ( $n = 200$ ) were on anticoagulation at ED arrival (warfarin 59.5%, dabigatran 23.0%, rivaroxaban 11.5%); 25.6% ( $n = 116$ ) on antiplatelets, and 29 (6.4%) on both.